

PCT/PTC 20 AUG 2004

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**CERTIFIED COPY OF**  
**PATENT APPLICATION**

**NO. TT/A/2002/00032**

**FILED ON 5<sup>TH</sup> MARCH, 2002**

**IN THE NAME OF**

**OXLEY PAUL**

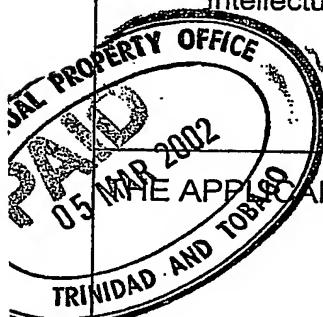
**PRIORITY DOCUMENT**  
SUBMITTED OR TRANSMITTED IN  
COMPLIANCE WITH  
RULE 17.1(a) OR (b)

**INTELLECTUAL PROPERTY OFFICE, TRINIDAD AND TOBAGO**

Form No.1  
PATENTS ACT  
Office

**REQUEST FOR GRANT OF  
PATENT OR UTILITY CERTIFICATE**

To: The Controller  
Intellectual Property Office



For Official Use  
Date of Receipt by Intellectual Property

APPLICATION No:  
(Office's Stamp)

RA/2002/00032.

FILING DATE:

Applicant's or Representative's File Reference:

X

THE GRANT OF A PATENT

THE GRANT OF A UTILITY  
CERTIFICATE

**IN RESPECT OF THE FOLLOWING PARTICULARS:****I. TITLE OF INVENTION:**

A process has been developed which treats and breaks emulsions in the industry by the use of water seeking/hydrophobic chemicals which reduce interfacial tension, increase fluid absorption and produce insitu gas/gases during use and as a consequence give rise to clean interfacial separation.

**II. APPLICANT(S)\***

Additional information is contained in supplemental box

Name(s): Oxley Paul

Address(es): Guapo Road, Fyzabad, Trinidad, West Indies.

Nationality / nationalities: Trinidadian

Country / countries of residence or principal place(s) of business:  
Trinidad and Tobago

Tel No:  
(868)677-7341

Telegraphic Address(es):  
hcarb@tsit.net.tt

Telex No:

Fax No:  
(868)677-7559

- The data concerning each applicant must appear in this box or, if the space is insufficient, in the supplemental box.

Address for service in  
Trinidad and Tobago \*

III. AGENT

The following agent has been appointed by the applicant(s) in the authorization of agent

accompanying this form

to be filed within  
two months from the  
filing of this form

Name: Garnet Mungalsingh, Ravi Maurice Mungalsingh and Co.  
Attorneys at Law and Notary Public

Address: 7 Court Street, San Fernando, Trinidad, West Indies.

Tel. No: (868)653-5013 Telegraphic Address(es): [garnetmungalsingh@tsst.net.tt](mailto:garnetmungalsingh@tsst.net.tt) Telex No: (868)653-7394 Fax No.: (868)653-7394

IV. INVENTOR

The inventor is the applicant

Additional information is  
contained in supplemental  
box

If inventor is not the applicant

Name: Dolly Nicholas

Address: 15 Hillcrest Drive, Battoo Lands, Marabella, West Indies

The statement justifying the applicant's right accompanies this Form

V. DIVISIONAL APPLICATION

This application is a divisional application  . The benefit of the

filing date  priority date of the initial application is claimed in as much as

the subject matter of the present application is contained in the initial application

identified below.

Initial Application No:

Date of filing of initial application:

#### VI. DISCLOSURES TO BE DISREGARDED FOR PRIOR ART PURPOSES

Disclosure occurred not more than one year before the filing date or priority date of the present application  
by reason or in consequence of acts of the applicant or his predecessor in title

of an abuse committed by a third party with regard to the rights of the applicant or his predecessor in title.

Additional information is contained in a statement accompanying this Form.

#### VII. PRIORITY DECLARATION (if any)

The priority of (an) earlier application(s) is claimed as follows

The priority of more than one earlier application is claimed;  
the data are indicated in the supplemental box

Country (if the earlier application is a regional or international application, indicate the office with which and the countries for which it was filed):

Filing Date:

Application No:

Symbol of the International Patent Classification:

not yet allocated

The certified copy of the earlier application  accompanies this Form

will be furnished upon request by the Controller, as prescribed by Rule 20(5)

has already been furnished with application No ..... [see Rule 20(5)]

The English translation of the earlier application  accompanies this Form

will be furnish upon request, as prescribed by Rule 20(6)

VIII. SUPPLEMENTAL BOX\*

\*Use this box if any of the boxes is not large enough to contain information to be furnished. Indicate the boxes continued in this box by their roman numerals and title [e.g., "II. APPLICANT(S) (continued)".]

IX. CHECK LIST (TO BE FILLED IN BY THE APPLICANT)

A. This application contains the following:

1. request five (5) sheet(s)

2. description two (2) sheet(s)

3. claim(s) one (1) sheet(s)

4. abstract one (1) sheet(s)

5. drawing(s) ..... sheet(s)

9 sheets

B. This Form, as filed, is accompanied by the items ticked below:

separate signed authorization of agent

statement justifying the applicant's right

statement that certain disclosures be disregarded

priority document(s) [certified copy of earlier application(s)]

English translation of earlier application(s) on which priority declaration is based

application fee

other document(s) (specify)

C. Figure number ..... of the drawings (if any) is suggested to accompany the abstract for publication

X. SIGNATURE(S) *Sejay Lai* ..... 28/02/2002.....

APPLICANT

Date

Type name(s) under signature(s).

Indicate whether applicant or agent.

TO BE FILLED IN BY THE CONTROLLER

1. Date of receipt of corrections or later filed documents completing the application:

2. Date fees received:

Nicholas, Dolly

February, 2002

A process has been developed which treats and breaks emulsions in the industry by the use of water seeking/hydrophobic chemicals which reduce interfacial tension, increase fluid absorption and produce insitu gas/gases during use and as a consequence give rise to clean interfacial separation.

Inventor: Dolly Nicholas  
15 Hillcrest Drive  
Battoo Lands  
Marabella.

Assignee: Hydrocarb (Trinidad) Limited  
Guapo Road,  
Fyzabad.

Filed: February, 2002                    5 Claims, No Drawings

"A process has been developed which treats and breaks emulsions in the industry by the use of water seeking/hydrophobic chemicals which reduce interfacial tension, increase fluid absorption and produce insitu gas/gases during use and as a consequence give rise to clean interfacial separation".

## INTRODUCTION

Attempts have been made to break down and/or separate oil, sand and water into phases within the petroleum and petrochemical industries, but these processes have never been able to treat and break down very tight emulsions to any great extent. Hence, the developed process is quite economical and practical, and converts the emulsions into a quality saleable product with significant reductions in base sediments and water, and biological oxygen demand and chemical oxygen demand levels for the treated fluids. Present systems use de-emulsifiers in order to achieve the necessary separation of the oil, sand and water mixture which may increase rather than decrease biological oxygen demand and chemical oxygen demand levels. Occasionally as a consequence of the addition of de-emulsifier, emulsions being treated end up becoming tighter emulsions. These tighter emulsions generally do not comply with the international environmental effluent standards and are not quality saleable products.

## INVENTION

At present problems exist globally where as a consequence of the petroleum and petrochemical extraction and by-products of production process treatment certain emulsions are produced which do not meet local and/or global saleable product standards [hereinafter called "the slops"].

A process has been developed which involves the treatment and break down of tight emulsified slops derived from the extraction and an industrial production process which are capable of meeting international saleable product standards.

The process can involve the use of water seeking/hydrophobic chemicals and heat which reduce interfacial tension, increase fluid absorption and produce insitu gas/gases during use, and as a consequence of these actions and/or chained scission, the cuts from the emulsion are rendered clean ones, categorized as the oil phase as exemplified by oil, solid phase as exemplified by sand and an aqueous phase as exemplified by water respectively. The oil phase produced herein results in an improved quality saleable product with significant reductions in base sediments and water. In addition, the aqueous phase produced herein has its biological oxygen demand and chemical oxygen demand levels significantly reduced.

The process uses either a solid as exemplified by ice, a liquid as exemplified by water and/or a gas as exemplified by steam and any combination thereof which would result in chained scission and/or reaction in the breaking up of tight emulsions. The said process achieves separation in clean phases. This

process allows for the optimal removal of oil from the slops and may on occasion achieve one hundred percent (100%) oil removal.

> **WHAT IS CLAIMED**

- [1] The creation of a process which results in the breaking down of tight emulsion from slops produced as a consequence of the extraction of petroleum/petrochemicals and by-products of the production process treatment.
- [2] As in 1 whereby the slops which were once non-saleable are now rendered an improved quality saleable product with clean cuts.
- [3] As in 1 and 2 whereby the aqueous phase created as a consequence of separation has its biological oxygen demand and chemical oxygen demand levels significantly reduced.
- [4] As in 1 and 2 whereby what is released into the environment after the extraction of petroleum/petrochemicals may meet international environmental effluent standards.
- [5] As in 1 where the process is more economic and environmentally friendly.

**THE REPUBLIC OF TRINIDAD AND TOBAGO**

**ABSTRACT**

"A process which treats and breaks emulsions in the industry whereby solids and fluids are separated into phases thus providing an improved quality saleable product resulting in significant reductions in base sediments and water, and the biological oxygen demand and chemical oxygen demand levels for the treated fluids."

TRINIDAD AND TOBAGO

PATENTS RULES 1996

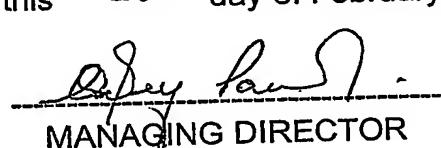
Form of Authorization of Agent in a matter of  
proceeding under the Act

WE, HYDROCARB (TRINIDAD) LIMITED of Guapo Road, Fyzabad have appointed MESSRS. GARNET MUNGALSINGH, RAVI MAURICE MUNGALSINGH AND COMPANY of No. 7 Court Street, San Fernando, Trinidad, Attorneys at Law and Notary Public, to act as our agent for the purpose of a process which has been developed which treats and breaks emulsions in the industry by the use of water seeking/hydrophobic chemicals which reduce interfacial tension, increase fluid absorption and produce insitu gas/gases during use and as a consequence give rise to clean interfacial separation and request that all notices, requisitions and communications relating thereto may be sent to such agents at the above address.

We hereby revoke all previous authorizations, if any, in respect of the same matter or proceeding.

We hereby declare that we are a company incorporated under the laws of Trinidad and Tobago.

Dated this 28<sup>th</sup> day of February, 2002.

  
MANAGING DIRECTOR

To: The Controller,  
Intellectual Property Office,  
Huggin's Building, South Quay,  
Port of Spain.

ORDINARY PATENT

APPLICATION FOR PATENT

I, DOLLY NICHOLAS, of 15 Hillcrest Drive, Battoo Lands, Marabella, Trinidad, West Indies, Consultant to Hydrocarb (Trinidad) Limited of Guapo Road, Fyzabad do solemnly and sincerely declare that I am in possession of an invention entitled "a process has been developed which treats and breaks emulsions in the industry by the use of water seeking/hydrophobic chemicals which reduce interfacial tension, increase fluid absorption and produce insitu gas/gases during use and as a consequence give rise to clean interfacial separation" which invention I believe will be of great public utility, and that the same is not in use in the Territory of Trinidad and Tobago to the best of my knowledge and belief, and that the instrument herewith delivered particularly describes and ascertains the nature of the said invention, and the manner in which the same is to be performed;

And I humbly pray that a Patent may be granted to the Company for the said invention.

And I make this declaration conscientiously believing the same to be true and according to the Statutory Declarations Ordinance, and I am aware that if there is any statement in this declaration which is false in fact which I know or believe to be false or do not believe to be true, I am liable to fine and imprisonment.

Declared at 7 Court Street, San Fernando, Trinidad, West Indies, )  
on the 25<sup>th</sup> day of February, 2002) *Dolly Nicholas*

Before me,

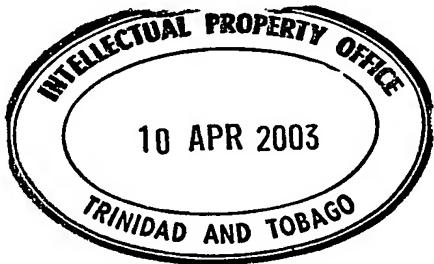
*Deoraj Maurice A.C.R.*  
Commissioner of Affidavits  
DEORAJ MAURICE A.C.R.  
Dated this 25<sup>th</sup> day of February, 2002.  
*Ravi Maurice Mungalsingh*

RAVI MAURICE MUNGALSINGH  
Attorney at Law  
7 Court Street, San Fernando.

To: The Controller  
Intellectual Property Office  
Huggins Building, South Quay, Port of Spain.



REPUBLIC OF TRINIDAD AND TOBAGO:



INTELLECTUAL PROPERTY OFFICE  
72/74 SOUTH QUAY  
PORT OF SPAIN

10<sup>th</sup> April, 2003.

I, MAZINA KADIR, Controller of the Intellectual Property Office, Trinidad and Tobago, do hereby certify that the foregoing Twelve (12) pages contain a true and correct copy of the original Patent Application No. TT/A/2002/00032 entitled "A process has been developed which treats and breaks emulsions in the industry by the use of water seeking/hydrophobic chemicals which reduce interfacial tension, increase fluid absorption and produce insitu gas/gases during use and as a consequence give rise to clean interfacial separation" filed in the name of Oxley Paul on the 5<sup>th</sup> March, 2002.

WITNESS my hand and Seal of  
Office this 10<sup>th</sup> day of April, 2003

A handwritten signature in black ink, appearing to read "MAZINA KADIR".

Controller  
Intellectual Property Office  
Trinidad and Tobago.